



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : RICHARD, D.
Appl. No. : 09/787,952
Filed : March 23, 2001
Title : SYSTEM, ESPECIALLY FOR A MOTOR VEHICLE, ABLE
TO START AN INTERNAL-COMBUSTION ENGINE AND
CHARGE AN ELECTRICAL CIRCUIT
Group Art Unit : 3747
Examiner : DOLINAR, A.
Docket No. : 1200.459

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REPLY BRIEF UNDER 37 C.F.R. § 1.193

April 19, 2004

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

In response to the Examiner's Answer dated February 17, 2004, Appellant respectfully requests the Board of Patent Appeals and Interferences to consider the following additional arguments and reverse the decision of the Examiner in whole.

REMARKS

The Examiner maintains the rejection of claims 1, 2, 6 and 7 under 35 USC 102(e) as being anticipated by Bolenz. The Examiner erroneously alleges that operation of the starting unit of Bolenz “inherently requires that starter 37 first to be actuated to engage the pinion, since this is how such a conventional starter operates, with starter/generator 14 then being actuated” (see page 3 of the Examiner’s Answer). However, contrary to the Examiner allegation, Bolenz clearly discloses on column 4, lines 25-28 that “at higher temperatures of the internal combustion engine over 40° C. the starting functions are performed exclusively by the substantially wear-free starter/generator device 24.” Thus, the Examiner’s allegations that the operation of the starting unit of Bolenz inherently requires that starter 37 first be actuated is in error, and the operation of the starting unit of Bolenz does not anticipate the starting actuation function as broadly specified by claims 1 and 6.

Also, Examiner alleges that control device 36 of Bolenz must inherently provide a control sequence of energizing and deenergizing the starter 37 and/or the starter/generator device 33. The Random House Webster’s College Dictionary (1999 Second Random House Edition), defines the word “sequence” as “continuous connected series”. Obviously, operation of the conventional starter 37 and the starter/generator device 33 of Bolenz is not continuous connected series. As clearly disclosed by Bolenz, “either the conventional starter, or the starter/generator, or both are activated”, but not according to a particular sequence so that the operation of the main electrical machine in motor mode is cut off when the condition for activation of the supplementary starter is detected. More specifically, Bolenz teaches an arrangement wherein a starter 13 and a starter/generator 14 **both** perform the starting function in temperatures under 30-40⁰ C. At higher temperatures of the internal combustion engine over 40° C the starting functions are performed exclusively by the starter/generator device. Thus, Bolenz fails to disclose the use of the starter/generator device and the

starter to act separately according to a particular sequence, while claim 1 clearly recites “means for detecting at least one condition for triggering activation of said supplementary starter, and the management means drive the main electrical machine and the starter, according to a particular sequence, when said condition is detected by said detection means” (emphasis added).

Furthermore, regarding claim 1, the Examiner alleges on page 5 of the Examiner’s Answer that “the function of cutting off the operation of the main electrical machine in motor mode is performed when only the starter 37 is used for starting. The claims do not require that the main electrical machine and supplementary starter be separately energized to apply starting rotation to the engine sequentially in a particular pattern. Appellant appears to be reading limitations from the specification into the claim.” Appellant respectfully disagrees. Claim 1 recites that “the management means include means for cutting off the operation of the main electrical machine in motor mode when a condition for activation of the supplementary starter is detected” (emphasis added), not simply cutting off the operation of the main electrical machine in motor mode, as erroneously alleged by the Examiner. Thus, the Examiner’s statement that “Appellant appears to be reading limitations from the specification into the claim”, is incorrect.

Regarding claim 6, again the Examiner erroneously alleges that the control device 36 of Bolentz must inherently provide a control sequence of energizing and deenergizing the starter 37 and/or the starter/generator device 33 (see arguments above related to the patentability of claim 1).

Also, contrary to the Examiner’s allegations, claims of the present application do require that the main electrical machine and supplementary starter be separately energized to apply starting rotation to the engine sequentially in a particular pattern as claim 6 recites that “the operation of the main electrical machine in motor mode is cut off when at least one condition for activation of the supplementary starter is detected”.

The Examiner maintains the rejection of claims 3, 8 and 11 were rejected under 35 USC § 103(a) as being unpatentable over Bolenz et al. in view of Dyches et al.

Regarding claim 3, the Examiner alleges that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the starting system of Bolenz et al to include means for detecting a failure to start, as taught by Dyches et al, in order to protect the starting system from damage due to excessive cranking.

First, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

Moreover, a statement that modifications of the prior art to meet the claimed invention would have been " 'well within the ordinary skill of the art at the time the claimed invention was made' " because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000)

Bolenz clearly discloses that “with temperatures of the internal combustion engine under 30-40° C., the conventional starter 23 and the starter/generator device 24 operating as a motor together provide the starting function. At higher temperatures of the internal combustion engine over 40° C. the starting functions are performed exclusively by the substantially wear-free starter/generator device 24.” Therefore, even if the combination of and modification of Bolenz and Dyches suggested by the Examiner could be made, the resulting internal combustion engine starting apparatus still would lack the means for cutting off the operation of the main electrical machine in motor mode, when the failure to start the engine at the end of a given time during which the main electrical

machine is operating in motor mode is detected, and actuating the supplementary starter, as recited in claim 3. As argued above, Bolenz clearly discloses the operation of both the conventional starter 23 and the starter/generator device 24 together (at temperatures below 40° C), or, at higher temperatures of the internal combustion engine over 40° C, the starting functions are performed exclusively by the substantially wear-free starter/generator device 24. Thus, the addition of the means for detecting a failure to start to the starting unit of Bolentz would be quite ineffectual.

Regarding claim 8: as argued above, Bolenz fails to disclose the method for control of a system for starting up the engine and charging an electrical circuit that includes the step of cutting off the operation of the main electrical machine in motor mode, when a condition for activation of the supplementary starter is detected, and the step detecting a failure to start the engine at the end of a given time during which the main electrical machine is operating in motor mode, thus detecting a triggering condition. As Bolenz discloses the operation of the drive unit 11 performed so that with temperatures of the internal combustion engine under 30-40° C., the starter 13 and the starter/generator 14 operated as a motor together perform the starting function, while at higher temperatures over 40° C., the starting function is performed exclusively by the wear-free starter/generator 14, the addition of the means for detecting a failure to start to the starting unit of Bolentz would be quite ineffectual, as it would not change the starting operation of Bolentz.

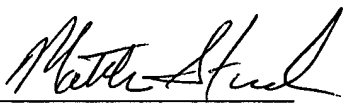
Claim 11 recites the management means include means that cuts off the operation of the main electrical machine in motor mode, when a condition for activation of the supplementary starter is detected by the means for detecting at least one condition, wherein the conditions are temperature and failure to start the main electrical machine at the end of a given time. The starting unit of Bolenz implies to be provided by the temperature sensor but for different purpose: to actuate either the starter/ge when the temperature is over 40° C, or both the starter and the starter/generator when the temperature is below 40° C. Contrary to Bolentz, claim 11 recites the system that uses the data

from the temperature sensor to detect the condition for activation of the supplementary starter, and cut off the operation of the main electrical machine in motor mode, when the condition for activation of the supplementary starter is detected.

Moreover, the Examiner fails to prove as to why one having ordinary skill in the art would have found the claimed invention to be obvious in light of the teachings of Dyches and Bolenz. Clearly, neither prior art reference provides motivation to operate the alternator/starter or the supplementary starter in the particular sequence by cutting off the operation of the main electrical machine in motor mode when the failure to start the engine at the end of a given time during which the main electrical machine is operating in motor mode is detected in combination with the means for comparing the temperature measured by the temperature sensor with the particular low threshold, as the present application discloses.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and notice to that effect is earnestly solicited.

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